THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for preparing a 6-oxo-14-hydroxy-Δ^7-morphinane comprising oxidising a 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane for a time and under conditions sufficient to form a 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide and converting the formed N-oxide to the 6-oxo-14-hydroxy-Δ^7-morphinane.

2. A method according to claim 1 wherein the oxidation is carried out by treating the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane with hydrogen peroxide in the presence of a carboxylic acid.

3. A method according to claim 2 wherein the carboxylic acid is formic acid or acetic acid.

4. A method according to claim 3 wherein the carboxylic acid is formic acid.

5. A method according to claim 4 wherein the concentration of formic acid is 45% by weight formic acid in water.

6. A method according to any one of claims 2 to 5 wherein the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane is treated with a molar excess of hydrogen peroxide at a concentration of 50% by weight in water.

7. A method according to any one of claims 2 to 6 wherein the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane is dissolved in a mixture of the carboxylic acid and a solvent prior to the addition of the hydrogen peroxide.

8. A method according to claim 7 wherein the solvent is ethanol.

9. A method according to any one of claims 1 to 8 wherein the oxidation is conducted at a temperature below 50°C.

10. A method according to claim 9 wherein the temperature is about 20°C.

11. A method according to any one of claims 1 to 10 including the additional step of isolating the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide before the conversion to 6-oxo-14-hydroxy-Δ^7-morphinane.

12. A method according to claim 11 wherein the isolation step comprises neutralising the oxidation reaction mixture to a pH of about 7 by adding a base and collecting the N-oxide as a solid.

13. A method according to claim 12 wherein the base is selected from sodium or potassium hydroxide or potassium carbonate.

14. A method according to claim 13 wherein the base is sodium hydroxide.

15. A method according to claim 14 wherein sodium hydroxide is added to the oxidation reaction mixture at a rate which ensures that the reaction temperature reaches 55°C.

16. A method according to any one of claims 1 to 15 wherein the formed N-oxide is converted to the 6-oxo-14-hydroxy-Δ^7-morphine by treating the N-oxide with a reducing agent.

17. A method for converting a 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide to a 6-oxo-14-hydroxy-Δ^7-morphinane comprising subjecting the N-oxide to reducing conditions to ring close the N-methyl group with the 14-hydroxy group forming an oxazolidine ring, and hydrolysing the ring closed oxazolidine product to form the 6-oxo-14-hydroxy-Δ^7-morphinane.

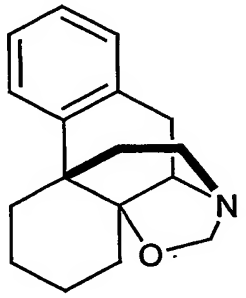
18. A method according to claim 17 wherein the reducing conditions comprise treating

the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide with a Fe(II) based reducing agent and formic acid.

19. A method according to claim 17 wherein the hydrolysing step is performed using a strong acid selected from hydrochloric acid, sulphuric acid, hydrobromic acid or phosphoric acid.

20. A method according to claim 19 wherein the strong acid is hydrochloric acid.

21. A method of preparing a morphinane compound having a modified morphinane skeleton of structure (B)



(B)

said method comprising treating a 6-oxo-N-methyl-14-hydroxy-Δ^7-morphinane-N-oxide with an Fe(II) reducing agent for a time and under conditions sufficient to ring close the N-methyl group with the 14-hydroxy group.

22. A method according to claim 19 wherein the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide is treated as a slurry in methanol with a Fe(II) based reducing agent, whereby formic acid is added.

23. A method according to claim 21 or 22 wherein the Fe(II) reducing agent is $FeSO_4$.

24. A method for preparing N-alkyl or N-alkenyl 6-oxo-14-hydroxy-morphinanes comprising:

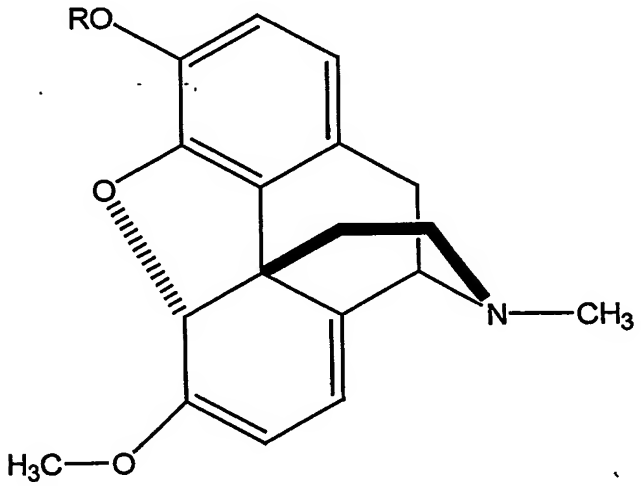
oxidising a 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane for a time and under conditions sufficient to form a 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide,

converting the formed N-oxide to a 6-oxo-14-hydroxy-Δ^7-morphinane,

reducing the Δ^7 double bond to form a 6-oxo-14-hydroxy morphinane, and

subjecting the 6-oxo-14-hydroxy-morphinane to N-alkylation to introduce the N-alkyl or N-alkenyl substituent.

25. A method according to any one of claims 1 to 16 and 24 wherein the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane is a compound of formula I:



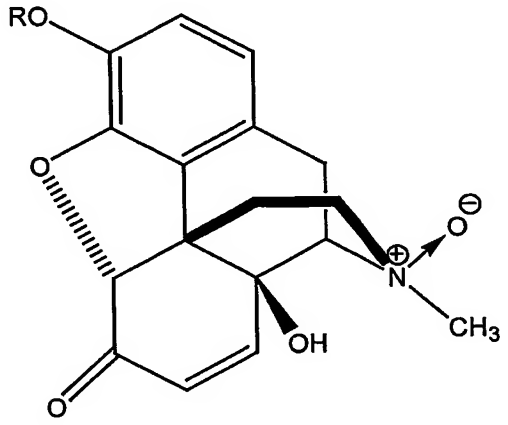
I

where R is H, C_1-C_6 alkyl, benzyl or acyl.

26. A method according to claim 25 wherein the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane is a compound of formula I where R is H or CH_3.

27. A method according to claim 25 wherein wherein the 6-methoxy-N-methyl-Δ^6,Δ^8-morphinane is a compound of formula I where R is H.

28. A method according to any one of claims 1 to 24 wherein the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane-N-oxide is compound of formula II:



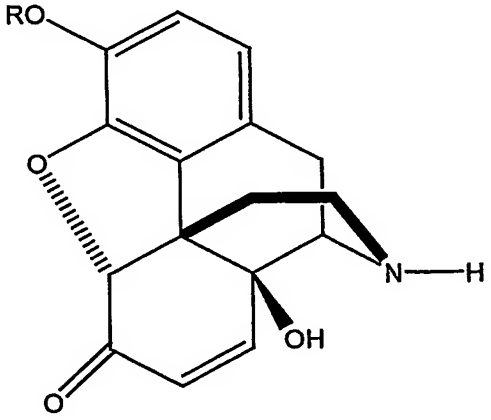
II

where R is independently selected from H, C_1-C_6alkyl, benzyl or acyl.

29. A method according to claim 28 wherein the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane N-oxide is compound of formula II where R is H or CH_3.

30. A method according to claim 29 wherein the 6-oxo-14-hydroxy-N-methyl-Δ^7-morphinane N-oxide is a compound of formula II where R is H.

31. A method according to any one of claims 1 to 20 and 24 wherein the 6-oxo-14-hydroxy-Δ^7-morphinane is a compound of formula III:



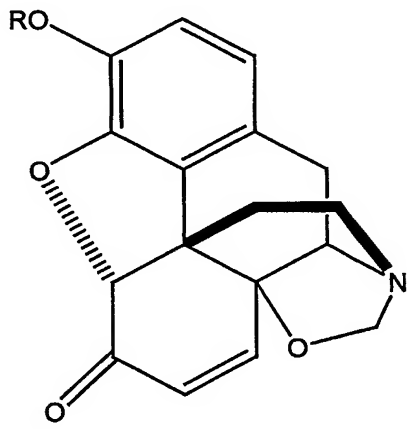
III

wherein R is H, C_1-C_6alkyl, benzyl or acyl.

32. A method according to claim 31 wherein the 6-oxo-14-hydroxy-Δ^7-morphinane is a compound of formula III where R is H or CH_3.

33. A method according to claim 32 wherein the 6-oxo-14-hydroxy-Δ^7-morphinane is a compound of formula III where R is H.

34. An oxazolidine of formula IV:



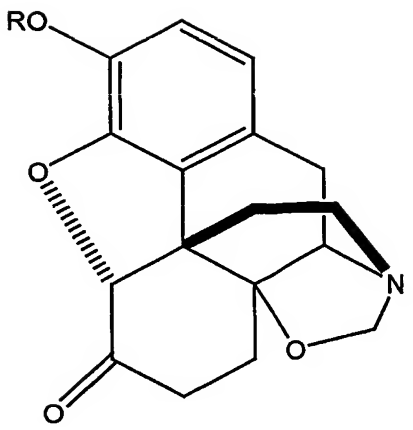
IV

where R is H, C_1-C_6alkyl, benzyl or acyl.

35. An oxazolidine of formula IV according to claim 34 wherein R is H, CH_3 or benzyl.

36. An oxazolidine of formula IV according to claim 35 wherein R is H.

37. An oxazolidine of formula V:



V

where R is H, C_1-C_6alkyl, benzyl or acyl.

38. An oxazolidine of formula V according to claim 37 wherein R is H or CH_3.

39. An oxazolidine of formula V according to claim 38 wherein R is H.

DATED this 22nd day of September, 2004

GlaxoSmithKline Australia Pty Ltd

By DAVIES COLLISON CAVE

Patent Attorneys for the Applicants